

CLAIMS

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1. Apparatus for producing a pulse of light, comprising a light source operable to produce a said pulse of light, and a filter for filtering undesired light output frequencies from said pulse, wherein said filter comprises water.

2. Apparatus as claimed in Claim 1, comprising means for defining a flow path for said water, which means is optically transparent at least in a region in which said water acts as said filter, and means for producing a flow of said water through said flow path.

3. Apparatus as claimed in Claim 2, wherein said light source forms part of the means defining said flow path for water, whereby said water acts both to filter said light pulse and to cool said light source.

4. Apparatus as claimed in Claim 1, which is for use in a method of cosmetic or therapeutic photo-treatment of the human or animal body.

5. Apparatus as claimed in claim 1, wherein said light pulse has an energy of not less than 250 J/cm²/sec.

6. A method of cosmetic or therapeutic photo-treatment of the human or animal body in which water is used as an infra-red absorbing filter.

7. Apparatus for producing a pulse of light, comprising a light source operable to produce a said pulse of light, and a filter for filtering undesired light output frequencies from said pulse, wherein said filter

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9. Apparatus as claimed in Claim 7, wherein said liquid acts as an infra red filter

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in regions where blood is a target of said light output.

13. Apparatus for producing a pulse of light, comprising: a
5 light source operable to provide an output of light in
response to a power input, and a power supply connected
to the light source for providing said power input,
wherein said power supply is operable to provide a
power output pulse or pulse train to drive said light
10 source to produce said light output pulse or pulse
train, during which light output pulse or pulse train
for at least 80% of the light output period (i.e. the
duration of a single pulse or the aggregate of the
duration of the pulses within a pulse train excluding
15 intervals between pulses) the light power output is
from 75 to 125% of the time-weighted average light
power output during the light output period.
14. Apparatus as claimed in Claim 13, wherein for at least
20 90% of the light output period the light power output
is from 75 to 125% of the time-weighted average light
power output during the light output period.
15. Apparatus as claimed in Claim 13, wherein means is
25 provided for adjusting said time-weighted average light
power output.
16. Apparatus as claimed in Claim 13, further comprising a
30 housing for said light source, an aperture defined by
said housing and a reflector in said housing positioned
to reflect a beam of light through said aperture.
17. Apparatus as claimed in Claim 13, further comprising an
optical filter in the path of said light beam, said

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~~optical~~ filter being adapted to pass only selected wavelengths of said light.

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- 5 18. Apparatus for photo-treatment comprising a light source, means for receiving a filter adapted to pass only selected wavelengths of light so as to dispose said filter in a light path from said light source, sensor means for detecting the presence and nature of a said filter in said filter receiving means, and
- 10 interlock means for preventing operation of said light source to carry out photo-treatment except when a said filter appropriate to an intended photo-treatment is present in said receiving means and/or for providing an alarm signal if a said appropriate filter is not
- 15 present in said receiving means.

19. Apparatus for photo-treatment comprising a light source, a filter adapted to pass only selected wavelengths of light disposed in a light path from said
- 20 light source, said light source being adapted to produce a light flux of at least $250 \text{ J/cm}^2/\text{sec}$, wherein said filter is a non-interference absorption filter.

20. Apparatus as claimed in Claim 19, further comprising
- 25 means for circulating a cooling liquid in contact with said light source.

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- 30 21. Apparatus as claimed in Claim 20, further comprising a filter adapted to pass only selected wavelengths of light disposed in said light path from said light source and also in contact with said cooling liquid.

22. Apparatus as claimed in claim 1, wherein the light source comprises a gas-filled arc lamp.

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Add C3 ✓
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